

Customer No. 24498
Attorney Docket #: RCA89086 US
Final Office Action Date: July 24, 2008

REMARKS

GROUND OF REJECTION

(1) Independent Claims 1, 11 and 12 have been rejected as unpatentable under 35 U.S.C. §103(a) over Eyer et al. (U.S. Patent 5,982,411) "in view of applicant's admitted prior art" ("AAPA").

(2) Claims 3 – 10 have been rejected as unpatentable under 35 U.S.C. §103(a) over Eyer et al. (5,982,411) "in view of applicant's admitted prior art" ("AAPA") and further in view of Yu (U.S. Patent 5,410,709).

SUMMARY OF THE CLAIMED SUBJECT MATTER

Five amended independent claims (claims 1, 4, 10, 11 and 12) are presented. Claim 4, indicated to be allowable if rewritten in independent form, has been so amended to include all limitations of previous claims 1 and 3 (claim 2 was canceled earlier). Claims 5 – 9 are now dependent on the (indicated) allowable independent claim 4 and should therefore be allowed along with claim 4.

Each of the other four independent claims 1, 10, 11 and 12 has been amended to more distinctly point out aspects of structural elements of the claims relating to the important feature of an adaptive decoder arranged for processing either of first and second streams of packets where each stream has a different transport protocol.

The recited elements of each of the four independent claims are shown and described in the application as follows.

In Fig. 1 of the application, an adaptive transport decoder processes at least two sources of streams of packets 12 and 14, the packets being arranged according to respectively different first and second transport protocols (data formats) (page 4, lines 1 – 12). Examples of two different transport protocols are illustrated schematically in Fig. 2 at "A" and "B" of the drawing (page 5, lines 1 – 6). In each of the illustrated transport protocols, each packet includes a "payload" (Fig. 2 and page 5, lines 13 – 16).

An example of a first packet stream source 12 is described (page 4, lines 6 – 8) as providing packets having a DSS (Direct Satellite

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System) transport packet protocol with a payload of 127 bytes in each payload (page 11, line 23). An example of a second packet stream source 14 is described (page 4, lines 11 – 12) as providing packets having a different ATSC (American Television Systems Committee) transport packet protocol with a payload of 184 bytes in each transport packet (page 11, lines 28 – 29). The different numbers of bytes in the payloads, along with other differences in byte sequences, require that a different decoder configuration be provided to decode each different protocol.

Applicant's invention includes an adaptive protocol decoder 30 (Fig. 1) coupled to the first and second packet stream sources 10, 12 by a selector 20 which selects and couples either one of the sources 10, 12 to an input of decoder 30. The decoder 30 extracts the payloads from either selected one of the packet stream sources (page 4, lines 18 – 20) and processes the packet streams according to the respective different first and second transport protocols.

Details of an adaptive transport protocol decoder 30 suited for extracting payloads from either selected packet stream source according to its respective different first or second transport protocol is shown in Fig. 3 and is described beginning at page 6, line 7.

**GENERAL STATEMENT OF PROPER BASIS FOR REJECTIONS UNDER
35 U.S.C. § 103(a)**

In a "Notice" dated October 3, 2007, the Director of the USPTO promulgated "Examination Guidelines For Determining Obviousness Under 35 USC 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex, Inc.", 550 U.S. ____, 127 S. Ct. 1727, 82 USPQ2d 1385, decided April 30, 2007.

In the "Guidelines", the Director stated:

"As reiterated by the Supreme Court in KSR, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.* Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;

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(2) Ascertaining the differences between the claimed invention and the prior art; and

(3) Resolving the level of ordinary skill in the pertinent art."

The "Guidelines" go on to state that the rejection must be supported by a clear articulation of the reasons, not merely conclusory statements:

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, [citation omitted] stated that '[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness'.

The "Guidelines" go on to recognize the continued viability of the TSM rationale (item "G") as follows:

"If the search of the prior art and the resolution of the Graham factual inquiries reveal that an obviousness rejection may be made using the familiar teaching-suggestion-motivation (TSM) rationale, then such a rejection using the TSM rationale can still be made. Although the Supreme Court in KSR cautioned against an overly rigid application of TSM, it also recognized that TSM was one of a number of valid rationales that could be used to determine obviousness".

In *KSR International Co. v. Teleflex, Inc. et al.*, *supra*, (see Section "B", pages 14 – 15 of the published decision), the U. S. Supreme Court discussed this requirement of "teaching, suggestion or motivation" and stated:

"When it first established the requirement of demonstrating a teaching, suggestion or motivation to combine known elements in order to show that the combination is obvious, the Court of

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Customs and Patent Appeals captured a helpful insight. See *Application of Berge*, 292 F.2d 955, 956 – 957 (1961). ---

---In the years since the Court of Customs and Patent Appeals set forth the essence of the TSM test, the Court of Appeals no doubt has applied the test in accord with these principles in many cases. There is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis".

The "Graham analysis" refers to required factual inquiries set out in *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1 (1966).

The factual inquiries enunciated by the Court in *Graham* are:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art."

It is therefore respectfully submitted that under the published guidelines incorporating the latest Supreme Court decision (the *KSR* case) the Examiner is required to find elements of the claims in citable references, to find such references which teach, suggest and/or motivate the person of ordinary skill to combine such elements in the manner set forth in the rejected claims, to identify all missing elements ("ascertain— the differences") and provide a "clear articulation" of the reason(s) why the claimed invention would have been obvious" (*KSR* supra). The *KSR* opinion requires that 'rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness'. In the absence of references disclosing all of the claimed elements or the showing of a teaching, suggestion or motivation to combine such claimed elements in the manner claimed, and a clear statement and rational analysis of its basis, an obviousness rejection cannot stand.

The § 103(a) Rejections of Claims 1, 11 and 12 Are Traversed

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Applicants submit that the Rejection does not make out a *prima facie* case of obviousness with respect to any of the rejected independent apparatus Claims 1, 11 or 12.

The Examiner has acknowledged (Final Rejection, para. 6) that:
"Eyer does not disclose different transport protocols for the first and second packet streams".

It therefore necessarily follows that Eyer does not disclose a "protocol decoder for extracting respective payloads ---- according to said respective different first and second transport protocols" (see third structural element of each of the rejected independent claims).

The Examiner also has acknowledged (Final Rejection, para. 7):
"Eyer does not disclose that the digital processing function (item 265) comprises a processor".

In addition, the Examiner states:

"Eyer discloses an adaptive transport decoder" (Final Rejection, para. 5).

but the term "adaptive" is never used by Eyer et al. and an "adaptive transport decoder" as set forth in all of the claims is not disclosed by Eyer et al. as will be pointed out below.

Thus, Eyer et al. fails to disclose at least the claimed structural elements above: i. e., "a source of a second stream of packets ---- having a second transport protocol --- wherein said second transport protocol is different than said first transport protocol "; "a protocol decoder --- for extracting the respective payloads ---- according to said respective different first and second transport protocols"; and an "adaptive transport decoder" as set forth in all of the claims, as well as a "processor" as set forth in rejected claims 3 and 10 - 12.

Furthermore, it is respectfully submitted that Eyer et al. also does not disclose the following additional elements of claim 1 (or claim 10 - see below):

"a selector, having respective first and second input terminals coupled to the first and second packet stream sources, and an

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output terminal coupled to the protocol decoder, and responsive to a select signal for selectively coupling either one of the first and second packet stream sources to the protocol decoder".

In the Final Rejection (paragraph 5), the Examiner relies upon "fig. 2, items 275, 240 and 250" for an alleged disclosure of the claimed "selector". Among the three items 275, 240, 250, there is no

"an output terminal coupled to the protocol decoder ----for selectively coupling either one of the first and second packet stream sources to the protocol decoder" (emphasis added) as recited in claim 1.

In addition, there is simply no way in which Eyer's elements 240, 250 and 275 can be reasonably interpreted to meet the limitations recited in claim 1 relating to an arrangement of first and second input terminals and an output terminal for a "selector" which is "responsive to a select signal" for "selectively coupling either one of the first and second packet stream sources to the protocol decoder".

Despite the lack of each of the quoted structural elements recited in each of claims 1, 11 and 12, the Examiner takes the position (paragraph 6) that:

"Applicant's admitted prior art discloses that packets from different streams have different transport protocols—. Therefore, it would be obvious to one skilled in the art at the time the invention was made to have different transport protocols in the invention of Eyer in order to provide data as related to the communication medium or by preference---".

The statement "in order to provide data as related to the communication medium or by preference" is apparently the Examiner's rationale to support a *prima facie* case of obviousness. However, the mere fact that different transport streams, which have different transport protocols may have existed in the art does not bridge the gap between the structure disclosed in the rejected claims as pointed out above and what is disclosed by Eyer et al. That reference (Eyer) does not disclose the several structural

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elements of the claimed decoder apparatus for processing different streams having different transport protocols which are pointed out above as MISSING from Eyer et al. Moreover, those missing elements simply are not disclosed by "Applicant's admitted prior art (which) discloses that packets from different streams have different transport protocols——". Neither the missing claim elements nor the showing of a teaching, suggestion or motivation to combine such elements in the manner claimed are found in any purported combination of Eyer et al. and AAPA.

As indicated in the "Guidelines" above, absent either the claimed structural elements or the showing of a teaching, suggestion or motivation to combine such elements in the manner claimed, and a clear statement and rational analysis of its basis, an obviousness rejection cannot stand.

Since neither all of the claimed structural elements nor the "rationale" required by the KSR decision and the PTO Guidelines has been provided, there is no basis for an obviousness rejection of the independent claims 1, 11 and 12.

In rejecting each of the claims in the Final Rejection, the Examiner states (para.6):

"Eyer does not disclose different transport protocols for the first and second packet streams. Applicant's admitted prior art discloses that packets from different streams have different transport protocols (pages 1-2; note: ATSC for terrestrial broadcasts has a different transport format than DSS for satellite broadcasts). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have different transport protocols in the invention of Eyer in order to provide data as related to the communication medium or by preference, as is known in the art —".

The statement "in order to provide data as related to the communication medium or by preference" is apparently the Examiner's rationale to support a *prima facie* case of obviousness.

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In response to Applicant's earlier arguments on this issue, the Examiner stated (Final Rejection, page 2, para. 2):

"AAPA does provide a teaching of the state of the art that different transport protocols are used for video (page 2, lines 20-23). AAPA also notes that multiple sources having different transport protocols are made available to be received (page 1, lines 20-26). AAPA provides motivation for combination with Eyer because the different transport protocols are disclosed as being proprietary (page 1, lines 9-18) known in the art as a preference for design choices (page 1, lines 30-32)".

However, the mere fact that different transport streams, which have different transport protocols, may have existed in the art does not bridge the numerous gaps between the structure disclosed in the rejected claims and what is disclosed by Eyer et al.

The Examiner has not met at least the second and third requirements of the Supreme Court to make factual inquiries as stated in the "Graham Analysis" quoted above i. e. "ascertaining the differences between the claimed invention and the prior art" and "resolving the level of ordinary skill in the pertinent art."

The Examiner has not stated all of the differences between what is presently claimed and what is disclosed in the Eyer et al. reference plus AAPA. Assuming arguendo that such a combination is appropriate, the Examiner has failed to note there is no disclosure in such a combination of several of the structural elements of the claims. The several apparatus elements which are pointed out above as missing from Eyer et al. are likewise not disclosed by "Applicant's admitted prior art". According to the Examiner, "AAPA discloses that packets from different streams have different transport protocols----". That is simply not a disclosure of any of the claimed structural elements missing from Eyer et al.

Furthermore, the fact that "AAPA discloses that packets from different streams have different transport protocols" is not a teaching, suggestion or motivation to combine Eyer et al. with any structural elements in the manner claimed. The stated "rationale" for combining Eyer et al. with "AAPA" (i.e., "to have different transport protocols in the invention of Eyer in

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order to provide data as related to the communication medium or by preference, as is known in the art") is not a "clear articulation of the reason(s) why the claimed invention would have been obvious" (*KSR supra*).

It is therefore respectfully submitted that a *prima facie* case of obviousness has not been made out with respect to any of the independent Claims 1, 11 or 12.

The disclosure of Eyer has been discussed in detail in previous responses. Essentially, the system of Eyer relates simply to channel identification information. Thus, Eyer does not disclose different digital transport protocols and states that it is "broadcast address information (e. g. frequency and/or PID)" (col. 8, line 36; col. 7, line 66; see also col. 10, lines 29 – 51), that is different for each channel in his system and is provided from his CPU 275 to the tuner/demodulators 240, 250 and the digital processing function 265.

Eyer et al. does not provide any disclosure or suggestion of significant claim elements (different transport protocols for first and second packet streams, apparatus for processing such different protocols, etc. as pointed out above), which facts are acknowledged in part by the Examiner.

The mere fact that different transport protocols were known in the prior art does not suggest the combinations of elements set forth in the rejected claims directed to an adaptive transport decoder.

The examiner bears the burden of establishing a *prima facie* case of obviousness. To support a conclusion that a claimed combination is obvious, either: (a) the references must expressly or impliedly suggest the claimed combination to one of ordinary skill in the art, or (b) the examiner must present a convincing line of reasoning as to why a person of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985).

The lack of a clear analysis and the unsupported conclusion in the present office action do not satisfy such requirements. No *prima facie* case of obviousness has been made out. It is therefore respectfully requested that the rejection of claims 1, 11 and 12 based on Eyer et al. in view of AAPA

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be withdrawn.

The § 103(a) Rejections of Claims 3 and 10 Are Traversed

Claims 3 and 10 have been rejected as obvious over Eyer et al. and "AAPA" as applied to claim 1, and further in view of Yu (5,410,709).

In addition to the deficiencies noted above in the the discussion of the Examiner's attempt to show that independent claim 1 (as well as similarly worded claims 11 and 12) are obvious, the rejection of claim 3 lacks a showing of other elements of the claim language.

The rejected dependent claim 3 and independent claim 10 are distinguished over the cited art in the same manner as set forth with respect to the first three elements of independent claim 1 above and, in addition, include the following elements:

Claim 3:

"wherein the protocol decoder comprises a processor, responsive to a first control program for processing the packets from the first packet stream source to extract the respective payloads, a second control program for processing the packets from the second packet stream source to extract the respective payloads, and a third control program for switching between the first control program and the second control program".

Claim 10:

"said protocol decoder further comprises a processor responsive to first, second and third control programs, the third control program is responsive to the select signal to switch to the first control program when the first packet stream source is coupled to the protocol decoder and to switch to the second control program when the second packet stream source is coupled to the protocol decoder".

The Examiner did not find any "processor" or any "first, second and third control programs, etc" as claimed above in Eyer et al. but relied upon Yu for such a disclosure. That is, the Examiner simply concluded (Final Rejection, para.7, line 4):

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"However, Eyer does not disclose that the digital processing function (item 265) comprises a processor. Yu discloses a processor (fig. 1, item 14) within a device (fig.1). The processor is responsive to control programs (col. 3, lines 40 – 46; col. 4, lines 3 – 5 and 51 – 67)."

Without any particular relationship, teaching, suggestion or motivation between the subject matter of Eyer et al. and that of Yu (other than that each describes electronic signal processing), the Examiner concluded:

"Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have a processor using control programs in the processing function of Eyer in order to flexibly perform processing functions (Yu, col. 4, line 67 through col. 5, line 10; col. 3, lines 55-60)."

There is no mention in the cited text of Eyer et al. to support the Examiner's reference to first, second and third control programs and that text merely refers to the standard processing of a single transport stream containing packetized data for a plurality of channels along with Packet ID (PID) or "channel" information. The PID allows the system to separate the data for a selected channel from the data for other channels that is contained in the single transport stream. This has nothing to do with control programs for extracting payloads from transport streams having different transport protocols and does not anticipate or render obvious the elements of claims 3 and 10 quoted above.

Therefore, the rejection of claims 3 and 10 should be reversed for the foregoing reasons, in addition to those which have been pointed out for independent claim 1.

Yu (col. 1, line 17) describes interrupt processing within a "hybrid" general purpose digital computing system where a number of central processing units operate under the control of different operating systems. The CPU's are capable of accessing all of the resources within the entire system. The Examiner relies on col. 4, line 67 through col. 5, line 15 to indicate what

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Yu discloses. That text reads as follows:

"The dispatching function module 40-4 contains routines for dispatching interrupts received from controller channel control programs loaded into an XCP interrupt hardware register 14-1 included within XCP central processing unit 14. More specifically, the interrupt received by the XCP central processing unit 14 causes the referencing of one of 16 interrupt vectors from memory. The interrupt vector containing the channel number information is loaded into the register 14-1. The module 40-4 responds to the interrupt, obtains the matching channel number and invokes the corresponding driver interrupt handler routine. Both modules 40-2 and 40-4 operatively couple to the interrupt control table 42. The function processing module 40-2 accesses the table 42 to store and clear entries while module 40-4 accesses the table 42 in dispatching interrupts to the appropriate driver handler routines."

It is submitted that there is nothing in either Yu or Eyer et al. which would lead anyone to combine any teachings of those two references. It is submitted that the Examiner's suggested incomplete combination has only been arrived at as a result of Applicant's teachings and inappropriate use of hindsight.

Following the *KSR* case, the Patent Office Board of Appeals and Interferences, faced with a recent similar rejection based on a purported combination of two references (corresponding to Eyer et al. and Yu) has held:

"We find no suggestion to combine the teachings and suggestions of A and B, as advanced by the Examiner, except for using Appellants' invention as a template through a hindsight reconstruction of Appellants' claims" (*Ex parte Crawford et al.*, Appeal 20062429, Decided May 30, 2007).

The rationale and reasoning required by the Patent Office Guidelines have not been provided and therefore no prima facie case of obviousness exists based on the combination of the cited art.


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The primary reference, Eyer et al., has been acknowledged by the Examiner as lacking elements of independent Claims 1, 11 and 12.

The Examiner has attempted to rely on the secondary references, "AAPA" and Yu to supply missing claim elements. However, the Examiner is not free to create such a combination in the absence of either motivation in the applied references to do so or a reasonable expectation of success. In view of the substantial lack of relevant teachings and disclosure in the Eyer et al. patent as pointed out above, one skilled in the art would not be aware that there is any reason or basis to consider Eyer et al., the AAPA and Yu together. Without such an awareness, the skilled artisan would not be motivated to modify the teachings of these references. Applicant submits that the present office action fails to provide the necessary clear articulation and analysis to meet the requirement for a rejection under 103 (a) based on a combination of references.

Accordingly, Applicant requests that the Examiner's rejection be withdrawn as to all of claims 1 and 3 – 12 and that the application be held to be in condition for allowance.

Respectfully submitted,

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